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      ---  -----  -----------
? s tartrate (2n)sensitive
           15654  TARTRATE
          996225  SENSITIVE
      S1     152  TARTRATE (2N)SENSITIVE
? s antibod?
      S2 1709844  ANTIBOD?
? s s1 and s2
             152  S1
         1709844  S2
      S3      17  S1 AND S2
? rd
      S4      15  RD  (unique items)
? s conformat?
      S5  549073  CONFORMAT?
? s s4 and s5
              15  S4
          549073  S5
      S6       1  S4 AND S5
? t s6/3,k,ab/1

 6/3,K,AB/1     (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2007 Dialog. All rts. reserv.

12218400   PMID: 10656666
   Reactivity and assay restriction profiles of monoclonal and polyclonal
  ***antibodies***  to acid phosphatases: a preliminary study.
  Bull H; Choy M; Manyonda I; Brown C A; Waldron E E; Holmes S D; Booth J C
; Nelson P N
  Molecular Immunology, Division of Biomedical Sciences, University of
Wolverhampton, UK.
  Immunology letters (NETHERLANDS)  Dec 1 1999,  70 (3) p143-9, ISSN
0165-2478--Print  Journal Code: 7910006
  Publishing Model Print
  Document type: Journal Article
  Languages: ENGLISH
  Main Citation Owner: NLM
  Record type: MEDLINE; Completed
  The development of secure diagnostic immunoassays requires, among others,
rigorous characterisation of potential ***antibody*** reagents. The
reactivity profiles of seven antibodies (six monoclonal [MAb] and one
polyclonal [PAb]) with putative specificity for tartrate-resistant acid
phosphatase (TRAP) and/or osteoclasts were evaluated in enzyme-linked
immunosorbent assay (ELISA) and/or immunocytochemistry. MAbs 2H1, 4E6 and
5C1 demonstrated assay restriction: exhibiting reactivity only in ELISA.
The remaining three MAbs (G211D, G312G and V35B) and the PAb 8023
recognised recombinant TRAP (rTRAP) in ELISA and native acid phosphatases
in selected tissues and cell lines. The latter were cytochemically assessed
for both ***tartrate*** - ***sensitive*** acid phosphatase (TSAP) and TRAP.
V35B showed reactivity against the monocytic leukaemia cell line U937 and
guinea pig kidney tissue (both TSAP+ and TRAP+) and ECV304 (TSAP+) cells.
Interestingly, the reactivity of MAb G211D co-localised with TRAP activity
in the membrane of osteoclasts but also detected cytoplasmic components in
U937 cells and human embryonic lung fibroblasts (TRAP+ and TRAP+). G211D
exhibited immunoreactivity against placental trophoblasts (positive for
total AP). Intriguingly, MAbs 2H1, 4E6, 5C1 and PAb 8023 cross-reacted with
potato acid phosphatase in ELISA, suggesting reactivity to
  ***conformationally*** similar epitopes. Thus, some of these reagents could
be used in the development of standardised diagnostic immunoassays or as
drug-targeting agents for conditions in which the pathological process
involves bone resorption, the MAbs G211D, 2H1, 4E6, 5C1 and PAb 8023 being
useful in ELISA but not immunocytochemical detection of TRAP.
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Reactivity and assay restriction profiles of monoclonal and polyclonal ***antibodies*** to acid phosphatases: a preliminary study.

The development of secure diagnostic immunoassays requires, among others, rigorous characterisation of potential ***antibody*** reagents. The reactivity profiles of seven antibodies (six monoclonal [MAb] and one polyclonal [PAb]) with putative specificity for tartrate-resistant acid phosphatase...

... acid phosphatases in selected tissues and cell lines. The latter were cytochemically assessed for both tartrate-sensitive acid phosphatase (TSAP) and TRAP. V35B showed reactivity against the monocytic leukaemia cell line U937...

... 5C1 and PAb 8023 cross-reacted with potato acid phosphatase in ELISA, suggesting reactivity to ***conformationally*** similar epitopes. Thus, some of these reagents could be used in the development of standardised...

Descriptors: *Acid Phosphatase--analysis--AN; *Antibody Specificity ; *Enzyme-Linked Immunosorbent Assay--methods--MT; *Immunohistochemistry --methods--MT; *Isoenzymes--analysis--AN; Animals; Antibodies , Monoclonal; Cross Reactions; Guinea Pigs; Humans; Osteoclasts--enzymology --EN; Sensitivity and Specificity; Trophoblasts--enzymology--EN...

Chemical Name: Antibodies, Monoclonal; Isoenzymes; tartrate-resistant acid phosphatase; Acid Phosphatase

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? s acid(w)phosphatase
         3670035  ACID
          296089  PHOSPHATASE
      S1   49057  ACID(W)PHOSPHATASE
? s antibod? (5n) (conformation? or conformer??)
         1709000  ANTIBOD?
          548475  CONFORMATION?
           21271  CONFORMER??
      S2    6349  ANTIBOD? (5N) (CONFORMATION? OR CONFORMER??)
? s s1 and s2
           49057  S1
            6349  S2
     .S3       6  S1 AND S2
? rd
      S4       2  RD  (unique items)
? t s4/3,k,ab/1-2

 4/3,K,AB/1     (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2007 Dialog. All rts. reserv.

13875321   PMID: 12165145
  Characterization of four monoclonal antibodies to recombinant human
tartrate-resistant acid phosphatase.
  Miyazaki Takashi; Matsunaga Toshiyuki; Miyazaki Shuichi; Hokari Shigeru;
Komoda Tsugikazu
  Department of Biochemistry, Saitama Medical School, 38 Morohongo,
Moroyama, Iruma-gun, Saitama 350-0495, Japan. miyasan@ns2.saitama-med.ac.jp
  Hybridoma and hybridomics (United States)  Jun 2002,  21  (3)  p191-5,
ISSN 1536-8599--Print  Journal Code: 101131136
  Publishing Model Print
  Document type: Journal Article
  Languages: ENGLISH
  Main Citation Owner: NLM
  Record type: MEDLINE; Completed
  In this study we produced a recombinant human Tartrate-resistant acid
phosphatase (TRAP) enzyme from baculovirus-infected insect cells, generated
four monoclonal antibodies (MAbs) 15A4, 13B9, 1C6 and 3G7, to the enzyme,
and characterized these antibodies. In the human serum and lung specimen,
all four antibodies appeared to have a high specificity for native TRAP
enzyme in western blot analysis, immunohistochemical analysis and enzyme
immunoassay.  These  antibodies  may  react  with  respective
conformational determinants, therefore, they may be useful for
detection of active TRAP. Only one of the antibodies, 15A4 also reacted
with a denatured epitope, therefore, it is suitable for western blot
analysis, enzyme immunoassay and for immunohistochemistry in the rat. Taken
together, having characterized properties of four monoclonal antibodies
against recombinant human TRAP enzyme may be useful for development of TRAP
specific immunoassays in pathology and hematology of the bone. They will
certainly be of use for the study of biosynthesis, regulation and function
of the TRAP enzyme.

  ... in western blot analysis, immunohistochemical analysis and enzyme
immunoassay.  These  antibodies  may  react  with  respective
conformational determinants, therefore, they may be useful for
detection of active TRAP. Only one of the...


 4/3,K,AB/2     (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2007 Dialog. All rts. reserv.

11331841   PMID: 9145320
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Characterization of monoclonal antibodies specific to human tartrate-resistant ***acid*** ***phosphatase*** .

Janckila A J; Cardwell E M; Yam L T
Special Hematology Laboratory, Veterans Affairs Medical Center, Louisville, Kentucky, USA.

Hybridoma (UNITED STATES) Apr 1997, 16 (2) p175-82, ISSN 0272-457X --Print Journal Code: 8202424
Publishing Model Print; Comment in Hybridoma. 1998 Oct;17(5) 487; Comment in PMID 9873995
Document type: Comparative Study; Journal Article; Research Support, U.S. Gov't, Non-P.H.S.
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

A major product of osteoclasts, tartrate-resistant acid phosphatase (TRAP) is an essential but insufficient enzyme for bone resorption. TRAP is an excellent cell marker for osteoclasts and macrophages and is being investigated as a serum marker for osteoclast activity in diseases of bone destruction. For decades, TRAP has also been used as a marker for hairy cell leukemia. Immunoassays for TRAP are sought to increase the sensitivity and specificity of the TRAP test for bone and hairy cells. Our laboratory recently developed a monoclonal antibody to TRAP (9C5) useful for immunohistochemical identification of TRAP-positive cells in paraffin sections. Herein, we characterize 9C5 in greater detail and report production of another anti-TRAP monoclonal antibody antibody (14G6) reactive with native, active enzyme antigen. Enzyme immunoassay, immunoprecipitation, western blot, and immunohistochemical analyses revealed the contrasting properties of 9C5 and 14G6. Antibody 9C5 reacts with a heat-denatured epitope and is suitable for denaturing western blot analysis and for immunohistochemistry. ***Antibody*** 14G6 reacts with a conformational determinant destroyed by heat and is suitable for immunoprecipitation of active TRAP, although 20% to 30% of activity is inhibited in the immune complexes. Having characterized several properties of these anti-TRAP antibodies, 9C5 and 14G6 may be useful for development of TRAP-specific immunoassays in bone pathology and hematology. They will certainly be of use for the study of biosynthesis, regulation, expression, and function of TRAP.

Characterization of monoclonal antibodies specific to human tartrate-resistant ***acid*** ***phosphatase*** .
A major product of osteoclasts, tartrate-resistant acid phosphatase (TRAP) is an essential but insufficient enzyme for bone resorption. TRAP is an excellent cell...

... a heat-denatured epitope and is suitable for denaturing western blot analysis and for immunohistochemistry. ***Antibody*** 14G6 reacts with a conformational determinant destroyed by heat and is suitable for immunoprecipitation of active TRAP, although 20% to...

Descriptors: *Acid Phosphatase--immunology--IM; *Antibody Specificity; *Immunohistochemistry--methods--MT; *Isoenzymes--immunology --IM
Enzyme No.: EC 3.1.3.- (tartrate-resistant ***acid*** ***phosphatase***); EC 3.1.3.2 (***Acid*** ***Phosphatase***)
Chemical Name: Antibodies, Monoclonal; Biological Markers; Epitopes; Isoenzymes; tartrate-resistant acid phosphatase; Acid Phosphatase
?

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? ds

Set     Items   Description
S1      49057   ACID(W)PHOSPHATASE
S2       6349   ANTIBOD? (5N) (CONFORMATION? OR CONFORMER??)
S3          6   S1 AND S2
S4          2   RD  (unique items)
? s tartrate (5n) prostate
          15645  TARTRATE
         242739  PROSTATE
      S5      18  TARTRATE (5N) PROSTATE
? rd
      S6      15  RD  (unique items)
? s s6 and s1
             15  S6
          49057  S1
      S7      12  S6 AND S1
? s s7 and py<=2003
Processing
             12  S7
       42983461  PY<=2003
      S8      11  S7 AND PY<=2003
? t s8/3,k,ab/1-11

 8/3,K,AB/1     (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2007 Dialog. All rts. reserv.

09322923   PMID: 1378647
  Effect  of  ultrasound  guided  core  biopsy  of  prostate  on  serum
concentration of prostate specific antigen and acid phosphatase
 activity.
  Aus G; Skude G
  Department of Surgery, County Hospital Ryhov, Jonkoping, Sweden.
  Scandinavian  journal of urology and nephrology (SWEDEN)    1992,
26  (1)  p21-3,  ISSN 0036-5599--Print   Journal Code: 0114501
  Publishing Model Print
  Document type: Journal Article
  Languages: ENGLISH
  Main Citation Owner: NLM
  Record type: MEDLINE; Completed
  Forty-three  patients  had  their  serum concentrations of prostate
 specific  antigen  and  activity  of  tartrate  inhibited acid
phosphatase  measured  before  and  after digital rectal examination,
transrectal  ultrasonography  and transrectal core biopsy. Transrectal core
biopsy significantly increased the values for both tumor markers but rectal
examination  and  ultrasonography  without  biopsy  had no such effect. The
measurements  returned  to normal within one week of biopsy in all but four
patients  who  still  had  slightly  increased  concentrations  of prostate
specific  antigen.  We  recommend  that the concentration of   ***prostate***
 specific  antigen  and  activity  of  tartrate  inhibited acid
  ***phosphatase***   are checked before biopsy of the prostate is carried on.

  ...of ultrasound guided core biopsy of prostate on serum concentration of
prostate specific antigen and   ***acid***     ***phosphatase***   activity.
  ...  ***1992***  ,
  Forty-three  patients  had  their  serum concentrations of prostate
 specific  antigen  and  activity  of  tartrate  inhibited acid
phosphatase  measured  before  and  after digital rectal examination,
transrectal  ultrasonography  and transrectal core biopsy. Transrectal core
...

... still  had  slightly  increased  concentrations  of  prostate  specific
antigen.  We  recommend  that  the concentration of   ***prostate***   specific
```

antigen and activity of tartrate inhibited acid ***phosphatase*** are checked before biopsy of the prostate is carried on.
Descriptors: *Acid Phosphatase--blood--BL; *Antigens, Neoplasm--blood--BL; *Prostate--pathology--PA
Enzyme No.: EC 3.1.3.2 (***Acid*** ***Phosphatase***); EC 3.4.21.77 (Prostate-Specific Antigen)
Chemical Name: Antigens, Neoplasm; Acid Phosphatase; Prostate-Specific Antigen

8/3,K,AB/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09015585 PMID: 1718651
Comparison of phosphatase isoenzymes PAP and PSA with bone scan in patients with prostate carcinoma.
Amico S; Liehn J C; Desoize B; Larbre H; Deltour G; Valeyre J
Department of Nuclear Medicine, Institut Jean Godinot, Reims, France.
Clinical nuclear medicine (UNITED STATES) Sep 1991, 16 (9) p643-8, ISSN 0363-9762--Print Journal Code: 7611109
Publishing Model Print
Document type: Comparative Study; Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
The aim of this study was to assess the diagnostic value of five biological markers--prostate acid phosphatase (PAP), prostate specific antigen (PSA), tartrate resistant (Tr-ACP), and tartrate labile (TI-ACP) acid phosphatases, and alkaline phosphatase bone isoenzyme (B-ALP)--for the detection of bone metastases in patients with prostate carcinoma. Using the Tc-99m HMDP bone scans of 80 patients scored from 0 (normal) to 2 (diffuse bone involvement) as the "gold standard," a receiver operating characteristic (ROC) analysis was performed. This method allows the determination of different threshold values (corresponding to different couples of sensitivity and specificity) for the assays. An ROC curve comparison was also performed. Results show that B-ALP is the best test for such detection (area under the ROC curve = 0.93; Spearman Rank correlation with bone scan r' = 0.81). Among the other markers, PSA was found to be the best (area under the ROC curve = 0.81; Spearman Rank correlation with bone scan r' = 0.58). In addition to the prostatic tumor markers (PSA and PAP), we suggest the use of the low-cost B-ALP assay in the follow-up of prostate carcinoma patients to determine the optimum moment to perform a bone scan. A normal result of this assay indicates a very low probability of bone metastasis; conversely, raising of B-ALP concentration must lead to a bone scan.

... ***1991*** ,
... aim of this study was to assess the diagnostic value of five biological markers--prostate acid phosphatase (PAP), prostate specific antigen (PSA), tartrate resistant (Tr-ACP), and tartrate labile (TI-ACP) acid phosphatases, and alkaline phosphatase bone isoenzyme...
; Acid Phosphatase--blood--BL; Aged; Alkaline Phosphatase --blood--BL; Antigens, Neoplasm--analysis--AN; Bone Neoplasms--diagnosis --DI...
Enzyme No.: EC 3.1.3.1 (Alkaline Phosphatase); EC 3.1.3.2 (***Acid*** ***Phosphatase***); EC 3.4.21.77 (Prostate-Specific Antigen)
...Chemical Name: Isoenzymes; Tumor Markers, Biological; Technetium Tc 99m Medronate; technetium Tc 99m hydroxymethylene diphosphonate; Alkaline Phosphatase; Acid Phosphatase; Prostate-Specific Antigen

8/3,K,AB/3 (Item 3 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

07609237 PMID: 2451579

Clinical significance of tartrate-sensitive and tartrate-resistant acid phosphatase indicated from the study of their biosynthetic mechanism.

Lam W K; Siemen M; Lee J C; Yam L T; Li C Y; Wold L E

Department of Ophthalmology, University of Texas Health Science Center, San Antonio.

Clinical physiology and biochemistry (SWITZERLAND) 1987, 5 (6) p305-14, ISSN 0252-1164--Print Journal Code: 8305885

Contract/Grant No.: CA 36934; CA; NCI; CS 34881; PHS

Publishing Model Print

Document type: Journal Article; Research Support, Non-U.S. Gov't; Research Support, U.S. Gov't, Non-P.H.S.; Research Support, U.S. Gov't, P.H.S.

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The tartrate-sensitive prostatic acid phosphatase, bands 2 and 4, are found in the soluble cytosol, and absent in the polysome of the prostate, while the tartrate-resistant acid phosphatase band 5 is present in the polysome and the soluble cytosol of hairy cells. The mRNA isolated from the prostate catalyzes the incorporation of 3T leucine into a protein different from that of bands 2 and 4. On the other hand, the mRNA isolated from the hairy cells catalyzes the incorporation of 3T leucine into band 5. The different biosynthetic mechanism of these two types of acid phosphatases are discussed in light of their different clinical significance.

Clinical significance of tartrate-sensitive and tartrate-resistant acid phosphatase indicated from the study of their biosynthetic mechanism.

... ***1987*** ,

The tartrate-sensitive prostatic acid phosphatase, bands 2 and 4, are found in the soluble cytosol, and absent in the polysome of the prostate, while the tartrate-resistant acid phosphatase band 5 is present in the polysome and the soluble cytosol of hairy cells. The...

Descriptors: *Acid Phosphatase--biosynthesis--BI; *Tartrates --pharmacology--PD; Acid Phosphatase --antagonists and inhibitors--AI; Acid Phosphatase--isolation and purification --IP; Cell-Free System; Chromatography, High Pressure Liquid; Humans; Leukemia, Hairy Cell...

Enzyme No.: EC 3.1.3.2 (***Acid*** ***Phosphatase***)

Chemical Name: RNA, Messenger; Tartrates; RNA; Acid Phosphatase

8/3,K,AB/4 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06143198 PMID: 6306966

Phosphoprotein phosphatase activity of human prostate acid ***phosphatase*** .

Wasylewska E; Czubak J; Ostrowski W S

Acta biochimica Polonica (POLAND) 1983, 30 (2) p175-84, ISSN 0001-527X--Print Journal Code: 14520300R

Publishing Model Print

Document type: Journal Article; Research Support, Non-U.S. Gov't

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed
Human prostate ***acid*** ***phosphatase*** (EC 3.1.3.2) has been shown to dephosphorylate different phosphoproteins with the maximum rate at pH 4.0-4.5. The activity with phosvitin is distinctly higher than with beta-casein, casein and most of all than with riboflavin-binding protein. The native phosvitin is homogeneous on isoelectric focusing with pI value of 2.1, whereas phosvitin partially dephosphorylated (in about 15%) by the prostate acid phosphatase shows multiple bands with pI values of 3.5 - 6.8 or higher. The phosphate groups bound to serine residues are removed enzymatically twice as fast as phosphothreonine residues. The apparent Km value for phosvitin was 2.4 X 10(-7) M, and is by three orders of magnitude lower than Km of p-nitrophenyl phosphate (2.9 X 10(-4) M). The competitive inhibitors of prostate acid phosphatase, fluoride and L(+)-tartrate, show the same Ki values for phosvitin and p-nitrophenyl phosphate.

Phosphoprotein phosphatase activity of human prostate acid ***phosphatase*** .
... ***1983*** ,
Human prostate ***acid*** ***phosphatase*** (EC 3.1.3.2) has been shown to dephosphorylate different phosphoproteins with the maximum...

... pI value of 2.1, whereas phosvitin partially dephosphorylated (in about 15%) by the prostate acid phosphatase shows multiple bands with pI values of 3.5 - 6.8 or higher. The phosphate...

... Km of p-nitrophenyl phosphate (2.9 X 10(-4) M). The competitive inhibitors of prostate acid phosphatase, fluoride and L(+)-tartrate , show the same Ki values for phosvitin and p-nitrophenyl phosphate.
Descriptors: *Acid Phosphatase--metabolism--ME; *Phosphoprote in Phosphatase--metabolism--ME; *Prostate--enzymology--EN
Enzyme No.: EC 3.1.3.16 (Phosphoprotein Phosphatase); EC 3.1.3.2 (Acid Phosphatase)
Chemical Name: Phosphothreonine; Phosphoserine; Phosphoprotein Phosphatase; Acid Phosphatase

8/3,K,AB/5 (Item 5 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06009206 PMID: 7165409
Age-associated changes in acid phosphatase characteristics in rat ventral prostate and other organs.
Tenniswood M P; Abrahams P P; Bird C E; Clark A F
Archives of andrology (UNITED STATES) Dec 1982, 9 (4) p283-91, ISSN 0148-5016--Print Journal Code: 7806755
Publishing Model Print
Document type: Journal Article; Research Support, Non-U.S. Gov't
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
Certain characteristics of acid phosphatase in the adult male rat are under androgenic control. In further investigations of this control, (1) the polyacrylamide gel electrophoretic pattern of enzyme activity, (2) enzyme specific activity, and (3) the extent of inhibition of enzyme activity by l-tartrate were examined for prostate, seminal vesicles, kidney, liver and testes from immature, maturing, young, and old mature adult rats. On gel electrophoresis, lysosomal ***acid*** phosphatase activity was found for all tissues from all groups of animals. Secretory enzyme was found for the prostate gland, but only after maturation (it appeared between days 28 and 35). At the same time the percent inhibition of activity by tartrate decreases. For the other

tissues, the percent inhibition by tartrate increases for the liver and seminal vesicles but not for the kidney and testes. These changes may reflect alterations in lysosomal enzyme characteristics and can be related to known changes in androgen production throughout the life span of the rat.

Age-associated changes in acid phosphatase characteristics in rat ventral prostate and other organs.
... ***1982*** ,
Certain characteristics of acid phosphatase in the adult male rat are under androgenic control. In further investigations of this control ...

... 2) enzyme specific activity, and (3) the extent of inhibition of enzyme activity by l-tartrate were examined for prostate, seminal vesicles, kidney, liver and testes from immature, maturing, young, and old mature adult rats. On gel electrophoresis, lysosomal ***acid*** phosphatase activity was found for all tissues from all groups of animals. Secretory enzyme was found...
Descriptors: *Acid Phosphatase--analysis--AN; *Aging; *Prostate--enzymology--EN
Enzyme No.: EC 3.1.3.2 (***Acid*** ***Phosphatase***)
Chemical Name: Acid Phosphatase

8/3,K,AB/6 (Item 6 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05601089 PMID: 6455992
Cytochemistry and biochemistry of acid phosphatases. III. Inhibition experiments of lysosomal and secretory acid phosphatases of the rat ventral prostate.
Seitz J; Aumuller G
Basic and applied histochemistry (ITALY) 1981, 25 (2) p95-104
, ISSN 0391-7258--Print Journal Code: 7910664
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
Biochemical and cytochemical inhibition experiments of rat prostatic acid phosphatase were performed using enzymes separated on isoelectric focusing (IEF) gels, and thin sections of the rat ventral ***prostate*** . Various inhibitors, including L (+) ***tartrate*** , mercuric ions and sodium fluoride were applied to electrofocused enzymes which were subsequently stained for ***acid*** ***phosphatase*** activity. Enzymes focused on IEF gels at pH 7.9 and 8.1, respectively, were inhibited with 1.8 x 10-3 M tartrate, while the enzyme activities with isoelectric points (pl) of 5.6 and 7.15, respectively, were only slightly inhibited by this compound. Using 10-3M mercuric ions, enzymes with pl of 5.6 and 7.15 were inhibited while the enzymes with pl of 7.9 and 8.1 were still active. The biochemical procedures were adapted to chopper sections of perfused-fixed ventral prostate of the rat. Preincubation of the sections with 2.4 x 10-3M mercuric chloride blocked the secretory enzyme and most of the lysosomal enzyme and resulted in an artificial staining of the Golgi apparatus and other cytoplasmic organelles. Nuclear precipitates however were prevented. L (+) tartrate could not be used at the ultrastructural level since it developed false positive results by the formation of lead tartrate. The results indicate that no selective inhibition of either secretory or lysosomal acid phosphatase can be achieved at the ultrastructural level using metal salts or tartrate, respectively.

... ***1981*** ,

Biochemical and cytochemical inhibition experiments of rat prostatic acid phosphatase were performed using enzymes separated on isoelectric focusing (IEF) gels, and thin sections of the rat ventral ***prostate*** . Various inhibitors, including L (+) ***tartrate*** , mercuric ions and sodium fluoride were applied to electrofocused enzymes which were subsequently stained for ***acid*** ***phosphatase*** activity. Enzymes focused on IEF gels at pH 7.9 and 8.1, respectively, were... ... of lead tartrate. The results indicate that no selective inhibition of either secretory or lysosomal acid phosphatase can be achieved at the ultrastructural level using metal salts or tartrate, respectively.

Descriptors: *Acid Phosphatase--antagonists and inhibitors --AI; *Cytoplasmic Granules--enzymology--EN; *Lysosomes--enzymology--EN; *Prostate--enzymology--EN

Enzyme No.: EC 3.1.3.2 (***Acid*** ***Phosphatase***)

Chemical Name: Nitrates; Tartrates; lead nitrate; Lead; Mercury; Mercuric Chloride; Acid Phosphatase

8/3,K,AB/7 (Item 7 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05365807 PMID: 7191887

[Diurnal variation of the elevated acid phosphatase activity in cases of prostate carcinoma (author's transl)]

Tageszeitliche Anderungen erhohter Aktivitaten der sauren Phosphatase beim Prostatacarcinom.

Wisser H; Knoll E; Schmid G

Journal of clinical chemistry and clinical biochemistry. Zeitschrift fur klinische Chemie und klinische Biochemie (GERMANY, WEST) May 1980, 18 (5) p297-301, ISSN 0340-076X--Print Journal Code: 7701860

Publishing Model Print

Document type: English Abstract; Journal Article

Languages: GERMAN

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The diurnal rhythm of total acid phosphatase and prostatic phosphatase activities was investigated in patients with prostate carcinoma. In these patients, the activities of total ***acid*** phosphatase, the tartrate-sensitive fraction of acid phosphatase , and lactate dehydrogenase decrease after therapy, whereas the activity of alkaline phosphatase increases. In all patients with prostate carcinoma, the total and tartrate-inhibited acid phosphatase , and the level of cortisol show a diurnal rhythm before therapy, with a minimum at night. In one patient, after orchiectomy, the cortisol rhythm remained unchanged, but the daily phosphatase variation was absent. Diurnal variations of lactate dehydrogenase and alkaline phosphatase were also observed in 2 patients without prostate carcinoma, but with elevated levels of these enzymes.

[Diurnal variation of the elevated acid phosphatase activity in cases of prostate carcinoma (author's transl)]

... ***1980*** ,

The diurnal rhythm of total acid phosphatase and prostatic phosphatase activities was investigated in patients with prostate carcinoma. In these patients, the activities of total ***acid*** phosphatase, the tartrate-sensitive fraction of acid phosphatase , and lactate dehydrogenase decrease after therapy, whereas the activity of alkaline phosphatase increases. In all patients with prostate carcinoma, the total and tartrate-inhibited acid phosphatase , and the level of cortisol show a diurnal rhythm before therapy, with a minimum at...

Descriptors: *Acid Phosphatase--metabolism--ME; *Prostatic Neoplasms--enzymology--EN

...Enzyme No.: L-Lactate Dehydrogenase); EC 3.1.3.1 (Alkaline Phosphatase); EC 3.1.3.2 (***Acid*** ***Phosphatase***)
Chemical Name: Hydrocortisone; L-Lactate Dehydrogenase; Alkaline Phosphatase; Acid Phosphatase

8/3,K,AB/8 (Item 8 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05341569 PMID: 7418193
The diagnostic significance of serum creatine kinase-BB isoenzyme in adenocarcinoma of prostate.
Aleyassine H; MacIsaac S G
Clinical biochemistry (CANADA) Jun 1980, 13 (3) p109-12,
ISSN 0009-9120--Print Journal Code: 0133660
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
The relative diagnostic usefulness of total serum acid phosphatase, tartrate-inhibited fraction of acid phosphatase, immunoreactive prostatic acid phosphatase, and creatine kinase-BB isoenzyme was evaluated in 30 patients with biopsy-proven adenocarcinoma of ***prostate*** . The total and tartrate-inhibited acid phosphatase, measured by standard chemical methods, were elevated in 8 patients with stage D disease. The radioimmunoassay (RIA) method confirmed these abnormal values and also indicated the presence of elevated prostatic serum acid ***phosphatase*** in 3 additional patients. The electrophoretic fractionation of total serum creatine kinase (CK) into its various isoenzyme components showed the presence of CK-BB isoenzyme in 8 patients. In 5 of these patients with detectable CK-BB isoenzyme, RIA values for prostatic ***acid*** ***phosphatase*** were also elevated. Histologic studies of the prostatic tissues revealed that the presence of serum CK-BB was invariably associated with poorly differentiated adenocarcinoma of prostate. The results of the present studies indicate that 1) with simultaneous measurements of serum CK-BB and immunoreactive prostatic acid phosphatase laboratory confirmation of prostatic cancer can be obtained in 50 per cent of patients; 2) determination of total and tartrate-inhibited acid phosphatase along with CK-BB and immunoreactive prostatic acid phosphatase does not increase the frequency of correct diagnosis; and 3) the presence of serum CL-BB isoenzyme is suggestive of poorly differentiated adenocarcinoma of prostate.

... ***1980*** ,
The relative diagnostic usefulness of total serum acid phosphatase, tartrate-inhibited fraction of acid phosphatase, immunoreactive prostatic acid phosphatase, and creatine kinase-BB isoenzyme was evaluated in 30 patients with biopsy-proven adenocarcinoma of ***prostate*** . The total and tartrate-inhibited acid phosphatase, measured by standard chemical methods, were elevated in 8 patients with stage D disease. The...

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serum...

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; Acid Phosphatase--blood--BL; Adenocarcinoma--blood--BL; Enzyme Tests; Humans; Isoenzymes; Prostatic Neoplasms--blood--BL
Enzyme No.: EC 2.7.3.2 (Creatine Kinase); EC 3.1.3.2 (***Acid*** Phosphatase)
Chemical Name: Isoenzymes; Creatine Kinase; Acid Phosphatase

8/3,K,AB/9 (Item 9 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04362817 PMID: 13139
[Activation of acid prostate phosphatase by 1-pentanol (author's transl)]
Aktivierung der sauren Prostataphosphatase durch 1-Pentanol
Gallati H; Roth M
Journal of clinical chemistry and clinical biochemistry. Zeitschrift fur klinische Chemie und klinische Biochemie (GERMANY, WEST) Dec 1976, 14 (12) p581-7, ISSN 0340-076X--Print Journal Code: 7701860
Publishing Model Print
Document type: English Abstract; Journal Article
Languages: GERMAN
Main Citation Owner: NLM
Record type: MEDLINE; Completed
The activity of the acid phosphatase from prostate was increased by 90% by the addition of 150 mmol/l 1-pentanol to the assay mixture. This activation results in an increased turnover of substrate, so that the phosphomonoester is cleaved more rapidly and a correspondingly larger amount of the release organic residue can be detected. The quantity of free phosphate, however, does not correspond to the substrate turnover, because some of the phosphate residue is transferred from the substrate to the 1-pentanol in a transphosphorylation reaction. The influence of the substrate, buffer, pH and of tartrate on the 1-pentanol-activated ***prostate*** phosphatase was investigated.

... ***1976*** ,
The activity of the acid phosphatase from prostate was increased by 90% by the addition of 150 mmol/l 1-pentanol...

... 1-pentanol in a transphosphorylation reaction. The influence of the substrate, buffer, pH and of tartrate on the 1-pentanol-activated ***prostate*** phosphatase was investigated.
Descriptors: *Acid Phosphatase--analysis--AN; *Pentanols --pharmacology--PD; *Prostate--enzymology--EN
Enzyme No.: EC 3.1.3.2 (***Acid*** ***Phosphatase***)
Chemical Name: Alcohols; Pentanols; Tartrates; Acid Phosphatase

8/3,K,AB/10 (Item 10 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04209491 PMID: 1268758
Acid phosphatases: androgen dependent markers of rat prostate.
Tenniswood M; Bird C E; Clark A F

Canadian journal of biochemistry (CANADA) Apr 1976, 54 (4) p350-7, ISSN 0008-4018--Print Journal Code: 0421034
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Our investigations on acid phosphatase (AP) were aimed at finding a biochemical assay marker for androgen actions in the rat prostrate. We quantitatively examined the effects of l-tartrate or formaldehyde on AP activity in tissue filtrates from nine adult male rat tissues, plasma and hemolysed red blood cells (HRBC). There was significant inhibition of AP activity in all instances with the exception of HRBC with ***tartrate*** . The ***prostate*** inhibition results were not different from those for seminal vesicles and adrenals but were different from the other tissues studied. Ten days following castration the inhibition by tartrate was less in all tissues studied except plasma and HRBC; the formaldehyde inhibition percentages were not altered.

... ***1976*** ,

Our investigations on acid phosphatase (AP) were aimed at finding a biochemical assay marker for androgen actions in the rat...

... was significant inhibition of AP activity in all instances with the exception of HRBC with ***tartrate*** . The ***prostate*** inhibition results were not different from those for seminal vesicles and adrenals but were different...

Descriptors: *Acid Phosphatase--metabolism--ME; *Prostate --enzymology--EN
Enzyme No.: EC 3.1.3.2 (***Acid*** ***Phosphatase***)
Chemical Name: Testosterone; Acid Phosphatase

8/3,K,AB/11 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

10016343 Genuine Article#: 477PC Number of References: 26
Title: Effect of tartaric acid on conformation and stability of human prostatic phosphatase: An infrared spectroscopic and calorimetric study (ABSTRACT AVAILABLE)
Author(s): Bem S; Ostrowski WS (REPRINT)
Corporate Source: Jagiellonian Univ,Inst Med Biochem, Coll Med,M Kopernika 7/PL-31034 Krakow//Poland/ (REPRINT); Jagiellonian Univ,Inst Med Biochem, Coll Med,PL-31034 Krakow//Poland/
Journal: ACTA BIOCHIMICA POLONICA, 2001, V48, N3, P755-762
ISSN: 0001-527X Publication date: 20010000
Publisher: ACTA BIOCHIMICA POLONICA, PASTEURA 3, 02-093 WARSAW, POLAND
Language: English . Document Type: ARTICLE
Abstract: The solution structure and thermal stability of human prostatic acid phosphatase (hPAP) in the absence and in the presence of tartaric acid were studied by Fourier transform infrared spectroscopy (FTIR) and differential scanning calorimetry (DSC). The temperature dependence of the infrared spectrum and DSC scans indicate that hPAP undergoes thermal unfolding at a temperature between 49.5 and 52.5 degrees. Binding of tartaric acid does not lead to major changes in the secondary structure of hPAP, however, hPAP with bound tartaric acid shows a significantly increased thermal stability. These results helped to better understand the mechanism of hPAP unfolding at the elevated temperature.

, 2001
Abstract: The solution structure and thermal stability of human prostatic acid phosphatase (hPAP) in the absence and in the presence of tartaric acid were studied by Fourier...

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